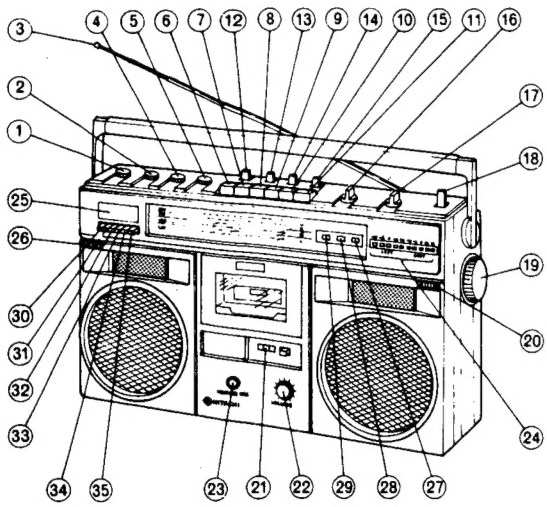
HITACHI

TRK-8300E, E(BS)

SERVICE MANUAL

No. 1558E



KEY TO ILLUSTRATIONS

1. BALANCE CONTROL
2. BASS CONTROL
3. TELESCOPIC ANTENNA (AERIAL)
4. TREBLE CONTROL
5. VOLUME CONTROL
6. PAUSE BUTTON
7. FAST-FORWARD/CUE BUTTON
8. REWIND/REVIEW BUTTON
9. PLAYBACK BUTTON
10. RECORD BUTTON
11. STOP/EJECT BUTTON
12. POWER SWITCH
13. TAPE SELECTOR SWITCH
14. FM MODE SWITCH
15. AFC/RIF SWITCH
16. FUNCTION SELECTOR
17. BAND SELECTOR
18. DOLBY NR SWITCH
19. TUNING CONTROL
20. BUILT-IN MICROPHONE (RIGHT)
21. TAPE COUNTER
22. MIX. MIC VOLUME
23. MIXING MIC SOCKET
24. LEVEL INDICATOR
25. TIME DISPLAY
26. BUILT-IN MICROPHONE (LEFT)
27. OPERATION INDICATOR (For E)
27. AC POWER INDICATOR (For BS)
28. DOLBY NR INDICATOR
29. FM STEREO INDICATOR
30. HOUR SET BUTTON
31. MINUTE SET BUTTON
32. TIME SET BUTTON
33. TIMER SET BUTTON
34. SLEEP ON BUTTON
35. SLEEP OFF/SNOOZE BUTTON

SPECIFICATIONS

GENERAL SECTION

Semi-conductors :	IC's : 8 Transistors : 26 Diodes : 16 LED's : 13 Varistor : 1 Varicap : 1 Zener diode : 1
Power (Mains) Supply :	AC : 220V, 50 Hz [For E] 240V, 50 Hz [For E (BS)] DC : 12V (IEC R20×8 or equivalent)
Power (Mains) Comsumption :	23W
Dimensions :	496 (W)× 281(H)×169(D)mm
Weight :	6.2kg (with batteries)
Power output :	5w/ch (T.H.D. 10%), 16W MPO
Speaker :	120mm, 2.8 ohms×2 30mm, 3k ohms×2

TUNER SECTION

Circuit System :	FM/SW/MW/LW 4-band superheterodyne
Tuning Range :	FM : 87.5 to 108 MHz SW : 6.0 to 18 MHz MW : 530 to 1605 kHz LW : 150 to 350 kHz
Sensitivity :	FM : 10 dB(pra.) 2 dB(max.) SW : 25 dB(pra.) 20 dB(max.) MW : 42 dB(pra.) 30 dB(max.) LW : 50 dB(pra.) 40 dB(max.)
Intermediate Frequency :	FM : 10.7 MHz SW/MW/LW : 468 kHz
Antennas (Aerials) :	FM/SW : Terescopic antenna MW/LW : Built-in ferrite-core antenna

TAPE RECORDER

Tape :	Cassette tape (C-30, 60, 90)
Tape Speed :	4.75cm/s
Recording System :	AC bias, 57 kHz
Erasing System :	AC erase
Track System :	4 track 2 channel
Frequency Response :	Normal : 50 Hz to 12 kHz CrO_2 : 50 Hz to 13 kHz METAL : 50 Hz to 14 kHz
S/N (Signal to Noise Ratio) :	50 dB (DOLBY NR : OFF), 60 dB (DOL BY NR : ON)
WoW and Flutter :	0.1% (WRMS)
Cross Talk :	50 dB (Between tracks) 40 dB (Between channels)
Erase Ratio :	60 dB
Input Sensitivity and Impedance :	Microphone : 0.4mV, 500 ohms Record/playback (DIN) : 6mV, 12k ohms
Output Level and Impedance :	Record/playback (DIN) : 775mV, 5 kohms EXT. Speaker : 2.8～8 ohms Headphone : 60 ohms
Fast Forward or Rewinding Time :	110 sec. (Using C-60)
Distortion :	2%
Motor :	DC Micro motor

CASSETTE TAPE RECORDER WITH FM/SW/MW/LW RADIO

May 1981

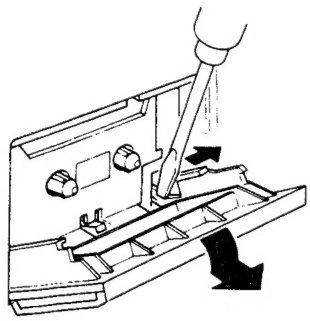
SAFETY PRECAUTION

The following precautions should be observed when servicing.

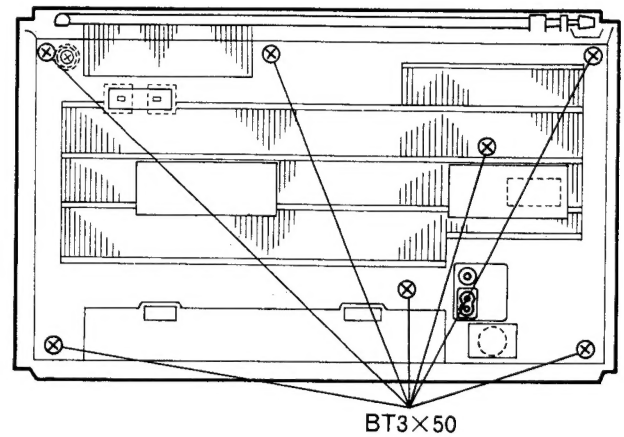
1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes. Critical parts are marked with ⚠ in the schematic diagram, and circuit board diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

DISASSEMBLY

1. Cassette lid

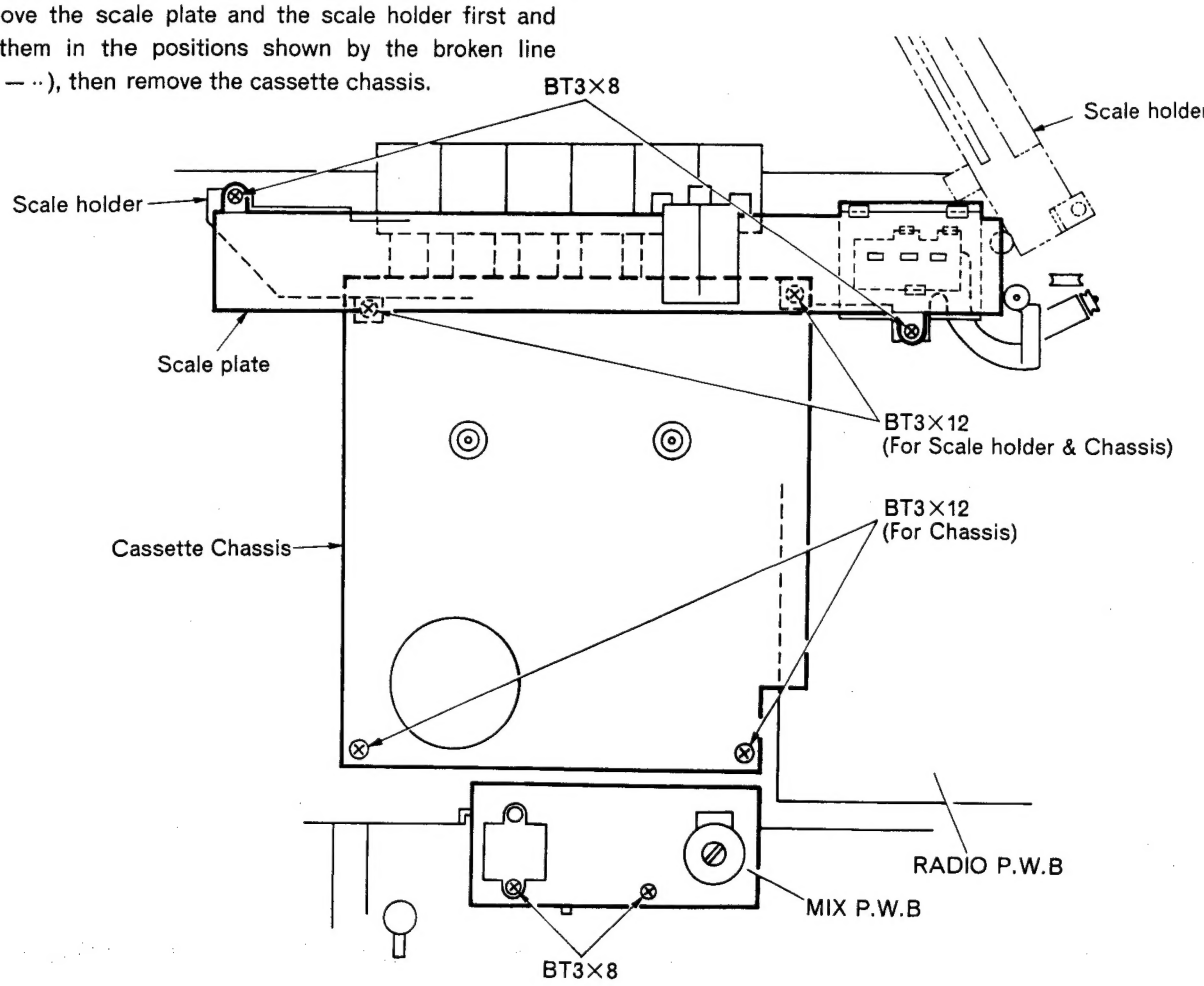


2. Rear case

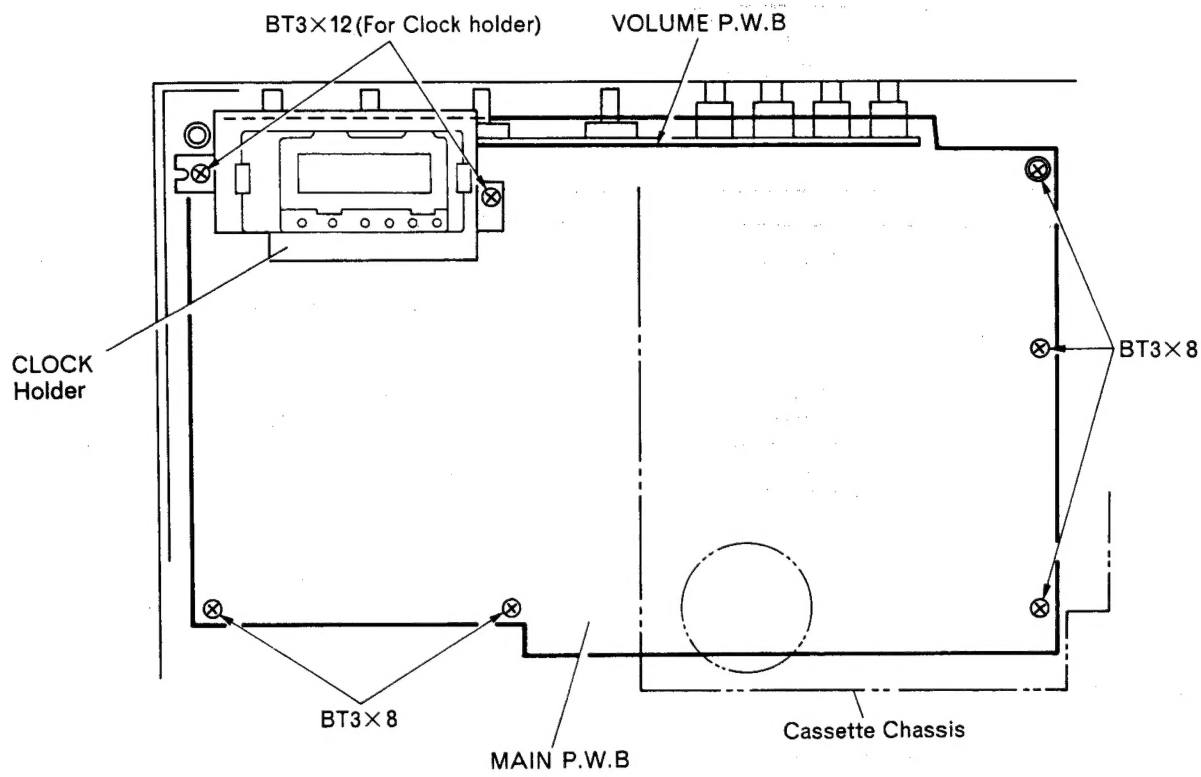


3. Scale plate, Scale holder, Cassette chassis and MIX PWB

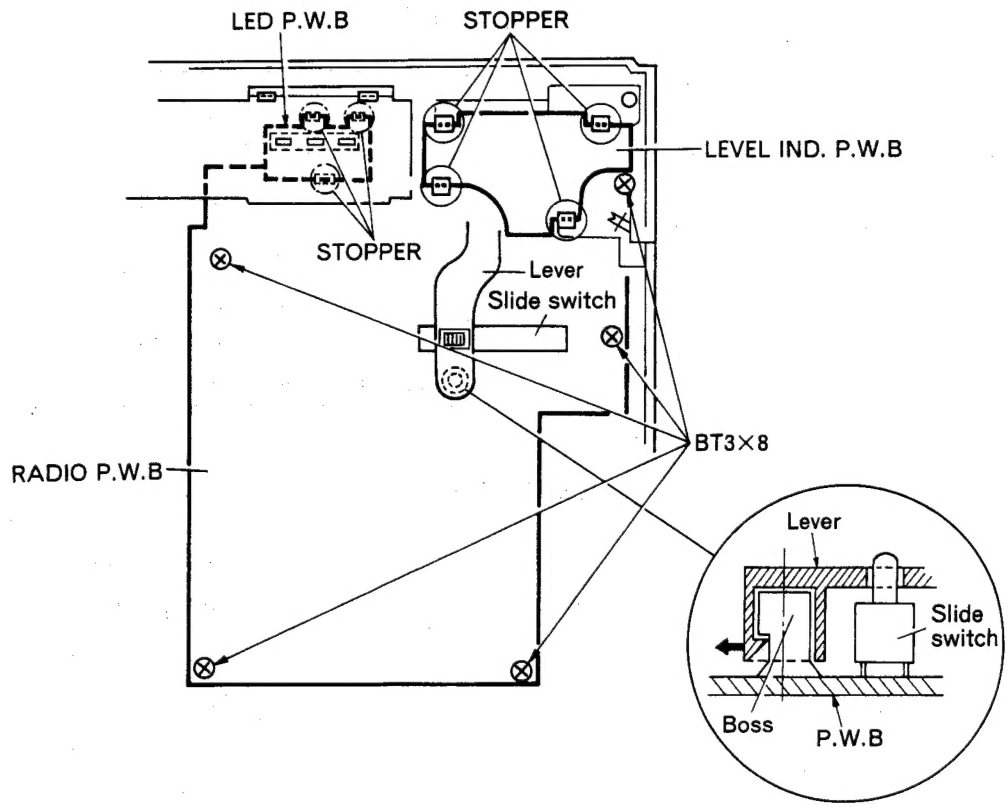
Remove the scale plate and the scale holder first and set them in the positions shown by the broken line (— ·· — ··), then remove the cassette chassis.



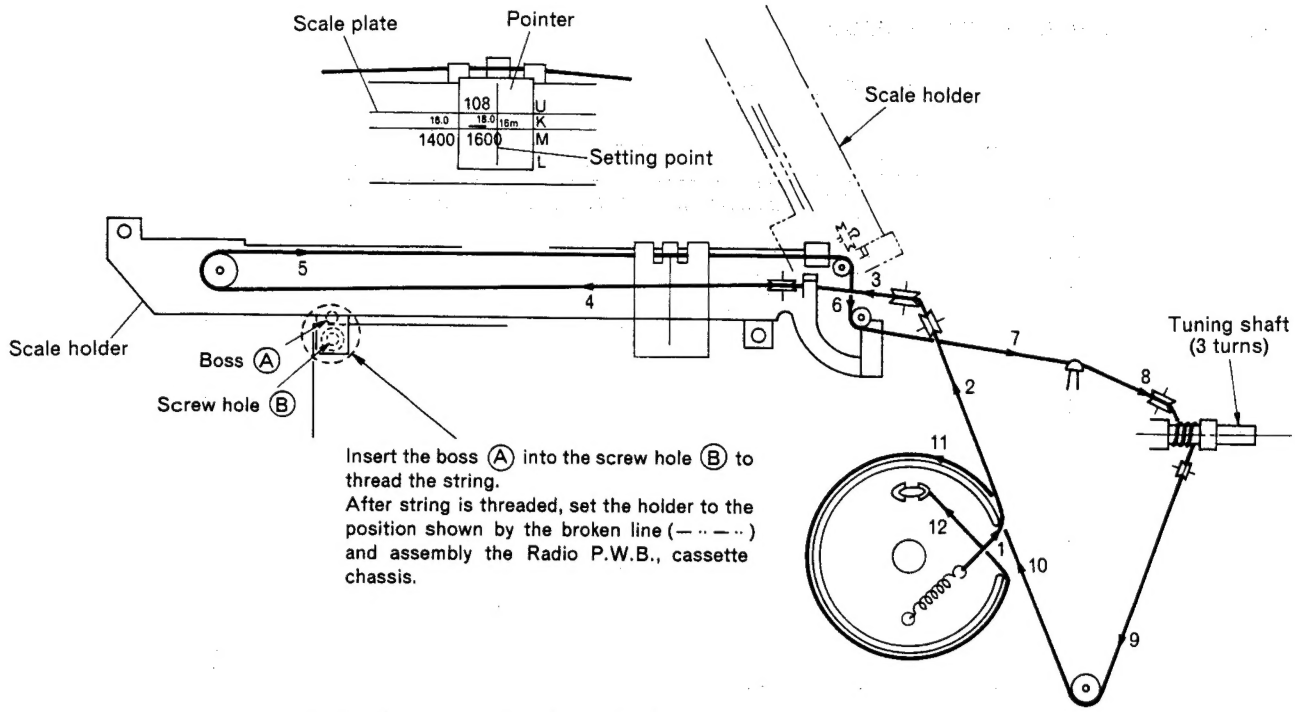
4. MAIN, VOLUME P.W.B and CLOCK MODULE



5. LED, LEVEL, and RADIO P.W.B



DIAL CORD STRINGING



STRINGING METHOD

1. Turn the pulley counterclockwise.
2. String the dial cord in the direction of arrow (No. 1~12)
3. Set the pointer to setting position.

LUBRICATION

Lubricate one or two drops of oil to rotating point or lubricate grease to sliding point.

Lubricate the respective parts listed once every 1000 hours or once a year under normal conditions of use.

Avoid oiling them excessively, or rotation may become irregular because of oil splashes.

Lubrication point		Oil or Grease
Rotary section	Metal and metal	Pan motor oil (10W-40)
	Mold and metal	Sonic slider oil (#1600)
Sliding section	Metal and metal	Hitasol (MO-138)
	Mold and mold Mold and metal	White grease (FL-LUBE-A)
Spring resonance prevention		Froil (GB-TS-1)

INSPECTION

Mode	Item	Pressure or Torque
Playback	Pressure of pressure roller	350 g 500g
	Take-up torque	35g-cm 60g-cm
	Supply reel back tension	1.5g-cm 3.5g-cm
Rewind	Rewind torque	60g-cm 90g-cm
Fast Forward	Fast Forward torque	65g-cm 90g-cm

ADJUSTMENT

1. Tuner Section

* For West Germany

Step		Adjustment Item	Measuring Instrument and Connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
			Measuring Instrument	Input Terminal	Output Terminal				
1	(1)	FM IF	Turn T202 fully counterclockwise.						
			● Genescope (10.7 MHz)	TP101	TP201	10.7 MHz	Highest	T101 T201	Note 1
	(2)	S-Curve						T202	Note 2
2	(1)	FM OSC. (Covering)	● FM signal generator (400 Hz 30% mod.) ● Oscilloscope ● VTVM	Ext. antenna terminal (thru dummy antenna) * Note 5	TP201	87 MHz (87.5 MHz*)	Lowest	L103	Max.
	(2)					109 MHz (108 MHz*)	Highest	CT102	
	(3)					Repeat steps (1) and (2)			
3	(1)	FM ANT. (Tracking)				90 MHz	90 MHz	L101	Max.
	(2)					106 MHz	106 MHz	CT101	
	(3)					Repeat steps (1) and (2)			
4	(1)	FM MPX (Multiplex)	● Frequency counter	Connect a 10μF 25V electrolytic capacitor between the No. 2 pin of IC301 and ground.	P8	—	—	RT302	19 kHz ±200 Hz (Note 3)
5	(1)	FM Separation	98 MHz, 60 dB L+R (1 kHz) 180mV, 30% mod. Pilot (19 kHz) 20mV, 10% mod. ● Osilloscope ● VTVM	Ext. Ant. terminal	TP301 TP302	98 MHz	98 MHz	RT301	Min. (Note 8)
6	(1)	AM IF	● Genescope (468 kHz)	Ferrite-core antenna	TP202	468 kHz	Highest	T151 T204	Note 4
	(2)					Repeat step (1)			
7	(1)	LW OSC. (Covering)	● AM signal generator (400 Hz, 30% mod.) ● VTVM	Ferrite antenna (thru dummy) * Note 6	TP202	145 kHz	Lowest	L156	Max.
	(2)					360 kHz	Highest	CT156	
	(3)					Repeat steps (1) and (2)			
8	(1)	LW ANT. (Tracking)				160 kHz	160 kHz	L153	Max.
	(2)					330 kHz	330 kHz	CT153	
	(3)					Repeat steps (1) and (2)			
9	(1)	MW OSC. (Covering)				515 kHz	Lowest	L155	Max.
	(2)					1650 kHz	Highest	CT155	
	(3)					Repeat steps (1) and (2)			
10	(1)	MW ANT. (Tracking)				600 kHz	600 kHz	L152	Max.
	(2)					1400 kHz	1400 kHz	CT152	
	(3)					Repeat steps (1) and (2)			

Step		Adjustment Item	Measuring Instrument and Connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
			Measuring Instrument	Input Terminal	Output Terminal				
11	(1)	SW OSC. (Covering)	● AM signal generator (400 Hz, 30% mod.)	Ext. antenna terminal (thru dummy antenna) * Note 7	TP202	5.8 MHz	Lowest	L154	Max.
	(2)					18.5 MHz	Highest	CT154	
	(3)					Repeat steps (1) and (2)			
12	(1)	SW ANT. (Tracking)	● VTVM			6.5 MHz	6.5 MHz	L151	Max.
	(2)					16.0 MHz	16.0 MHz	CT151	
	(3)					Repeat steps (1) and (2)			

Note :

1. Feed in a weak signal to TP101 from the genescope. Adjust T101, T201 for maximum gain and the wave form indicated in Figure 1 If the center of the wave form cannot be lined up on the marker, adjust the right/left balance.
2. Use the T202 core to form the S-curve shown in Figure 2. Adjust the symmetry of A and B about point C for linearity.
3. Connect the frequency counter to P8, via a resistor of 100 kΩ.
4. Feed in a weak signal from the genescope. Adjust T151 and T204 for maximum gain and the waveform of Figure 3.

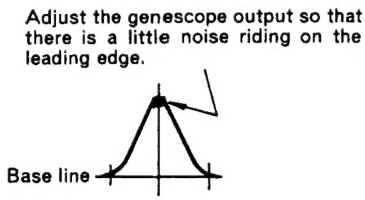


Fig. 1

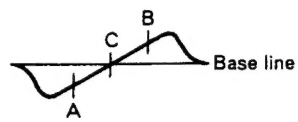


Fig. 2

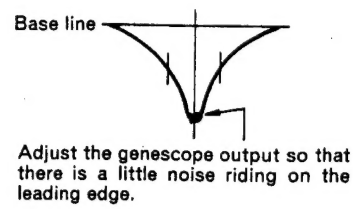
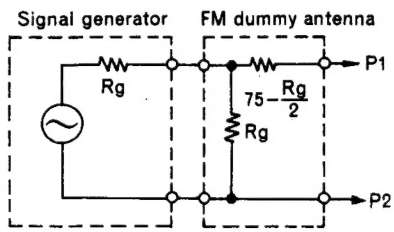


Fig. 3

5. Transmit to the dummy antenna in Figure 4 and connect to P1.

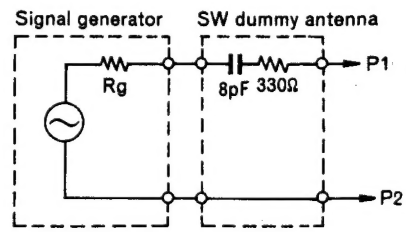


Rg : SG's output impedance

Fig. 4

6. Connect AM signal generator to loop antenna, bring near to ferrite antenna.

7. Transmit to the dummy antenna in Figure 5 and connect to P1.



Rg : SG's output impedance

Fig. 5

8. Feed the signal for each channel and adjust RT301 so that an optimum separation can be obtained.

2. Tape Recorder Section

Perform the following adjustments in the sequence stated after cleaning the head, pressure roller, and capstan with a head cleaning stick moisted in alcohol.

Item	Adjustments	Measuring instrument & connection			Check tape	Mode	Adjust	Reading
		Measuring instrument	Input terminal	Output terminal				
1	Head azimuth	• VTVM	——	DIN OUT or TP401L, R	MTT-316 or MTT-216, 12.5KHz	PLAY	Azimuth adjusting screw	Output Max. (See Note 1)
2	Playback gain	• VTVM	——	TP401L, R	MTT-150, 400Hz 200 nwb/m	PLAY	RT401L, R	0.775V (0 dBm)
3	Level indicator						RT403L, R	(See Note 2)
4	Bias current	Set the tape selector switch to the normal position. Set the RT402 L, R to middle position.						
		• Audio oscillator (1.25KHz/12.5 KHz,−20 dB) • Frequency counter • VTVM	DIN IN	DIN OUT or TP401L, R	Hitachi UD tape	REC/ PLAY	RT404L, R	(See Note 3)
5	Record/Playback output	Set the tape selector switch to the normal position.						
		• Audio oscillator (400Hz, 0dB) • Frequency counter • VTVM	DIN IN	DIN OUT or TP401L, R	Hitachi UD tape	REC/ PLAY	RT402L, R	0dB±1dB
6	Dolby NR check	• Audio oscillator (5KHz) • Frequency counter • VTVM	DIN IN	TP401L, R	——	REC	——	(See Note 4)

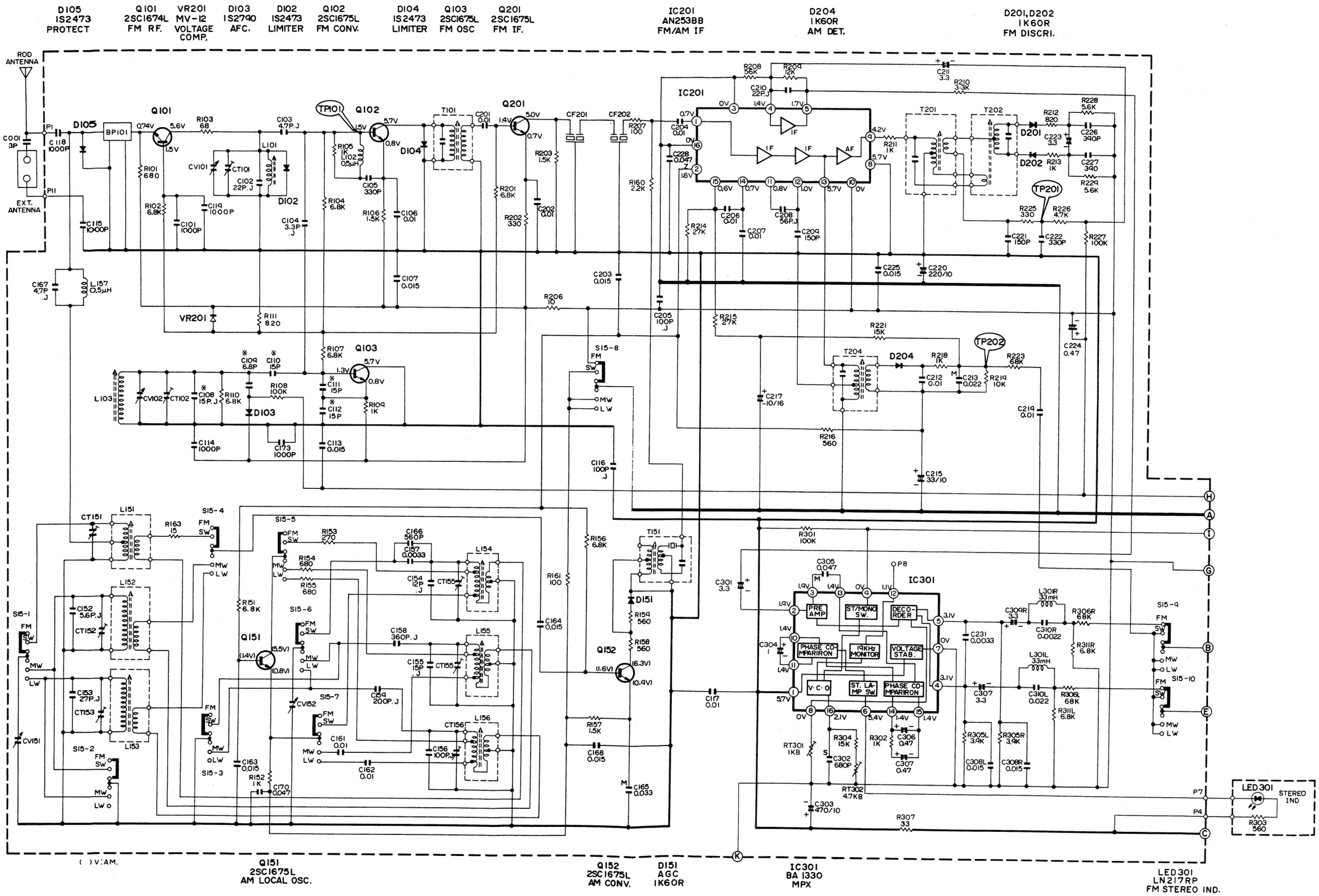
Note :

1) When the maximum values of both channels are different, tune to the maximum value of the L channel. In this case, the difference between the maximum values of both channels should be within 2dB.
2) With the condition shown in item 3, adjust RT403 L, R so that the level indicator lamp (0dB) lights up.
3) a. Set the RT402 L, R to middle position.
   b. Turn the L402L, R fully clockwise.
   c. Record a 1.25KHz and 12.5KHz signals with a level of 0dB −20dB (at test point TP401L, R) on Hitachi UD tape. Then, playback this tape and adjust RT404L, R so that the output difference is within ±2dB.
4) Supply a 5KHz signal to the DIN IN jacks to obtain the level of −30.4dBm ± 0.1dB at test points TP401L, R. Confirm that the level is boosted by 8dBm ± 0.2dB when the Dolby NR switch is set to ON.

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		CAPACITORS
CT101-102	5052391	PLASTIC FILM VARIABLE CAPACITOR
CT151	5058191	TRIMMER 10PF
CT153	5058191	TRIMMER 10PF
CT154	5058191	TRIMMER 10PF
CT156	5058102	VARIABLE CAPACITOR
CV101-102	5052391	PLASTIC FILM VARIABLE CAPACITOR
CV151-152	5052391	PLASTIC FILM VARIABLE CAPACITOR
C101	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10
C102	0208133	CERAMIC (RESISTOR SHAPE) 22PF+-5%
C103	0208125	CERAMIC (RESISTOR SHAPE) 4.7PF+-5%
C104	0208124	CERAMIC (RESISTOR SHAPE) 3.3PF+-5%
C105	0209004	CERAMIC DISC (RESISTOR SHAPE) 330PF+-10%
C106	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C107	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C108	0248174	CERAMIC DISC 15PF+-5%(N-330)
C109	0208157	CERAMIC (RESISTOR SHAPE) 6.8PF+-10%(NP-0)
C110	0208163	CERAMIC (RESISTOR SHAPE) 15PF+-10%
C111	0208161	CERAMIC (RESISTOR SHAPE) 15PF+-10%(NP-0)
C112	0208161	CERAMIC (RESISTOR SHAPE) 15PF+-10%(NP-0)
C113	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C114	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C115	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C116	0208141	CERAMIC DISC (RESISTOR SHAPE) 100PF+-5%
C117	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C118	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C152	0208126	CERAMIC (RESISTOR SHAPE) 5.6PF+-5%
C153	0208134	CERAMIC (RESISTOR SHAPE) 27PF+-5%
C154	0208130	CERAMIC (RESISTOR SHAPE) 12PF+-5%
C155	0208131	CERAMIC (RESISTOR SHAPE) 15PF+-5%
C156	0208141	CERAMIC DISC (RESISTOR SHAPE) 100PF+-5%
C160	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C161	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C162	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C163	0209027	CERAMIC DISC (RESISTOR SHAPE) 0.015MF+-30%
C164	0209027	CERAMIC DISC (RESISTOR SHAPE) 0.015MF+-30%
C167	0208125	CERAMIC (RESISTOR SHAPE) 4.7PF+-5%
C168	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C201	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C202	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C203	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C204	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C205	0248684	CERAMIC DISC (RESISTOR SHAPE) 100PF+-5%
C206	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C207	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C208	0208138	CERAMIC DISC (RESISTOR SHAPE) 680PF+-16%
C209	0209011	CERAMIC DISC (RESISTOR SHAPE) 150PF+-10%
C210	0208133	CERAMIC DISC (RESISTOR SHAPE) 22PF+-5%
C212	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C219	0209026	CERAMIC DISC (RESISTOR SHAPE) 0.01MF+-30%
C221	0209011	CERAMIC DISC (RESISTOR SHAPE) 150PF+-10%
C222	0209004	CERAMIC DISC (RESISTOR SHAPE) 330PF+-10%
C226	0209005	CERAMIC DISC (RESISTOR SHAPE) 390PF+-10%
C227	0209005	CERAMIC DISC (RESISTOR SHAPE) 390PF+-10%
C308LR	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C310LR	0209022	CERAMIC DISC (RESISTOR SHAPE) 0.0022MF+-
C401LR	0209027	CERAMIC (RESISTOR SHAPE) 0.01MF+-30%
C404R	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C409LR	0209024	CERAMIC DISC (RESISTOR SHAPE) 4700PF+-30%
C411LR	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C423LR	0209022	CERAMIC DISC (RESISTOR SHAPE) 0.0022MF+-
C431LR	0209003	CERAMIC DISC (RESISTOR SHAPE) 270PF+-10%
C433LR	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C441LR	0209022	CERAMIC DISC (RESISTOR SHAPE) 0.0022MF+-
C442LR	0209025	CERAMIC DISC (RESISTOR SHAPE) 6800PF+-30%
C448LR	0209024	CERAMIC DISC (RESISTOR SHAPE) 4700PF+-30%
C452LR	0209010	CERAMIC DISC (RESISTOR SHAPE) 1000PF+-10%
C461LR	0209002	CERAMIC DISC (RESISTOR SHAPE) 220PF+-10%
		RESISTORS
RC601	0186451	CR PACK
RC602	0186451	CR PACK
RT301	0151806	SEMI VARIABLE RESISTOR 1KOHM (B)
RT302	5007185	SEMI VARIABLE RESISTOR 4.7K OHM
RT401LR	0151816	SEMI VARIABLE RESISTOR 2K OHM (B)
RT402LR	0151817	VARIABLE RESISTOR 20K OHM (B)
RT403LR	0151808	SEMI VARIABLE RESISTOR 10K OHM RS88
RT404LR	0151819	SEMI VARIABLE RESISTOR

SCHEMATIC DIAGRAM (Tuner Section)



Note

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

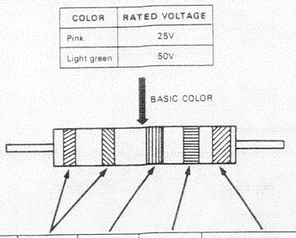
Circuit No.		
R101 150-RS·1·K-	Value	No indicated Ω(Ohm) M : 1000 kΩ
	Tolerance	No indicated ±5% K : ±10% M : ±20%
	Wattage	No indicated ¼W
	Sort	No indicated Carbon film RC : Composition RW : Wire wound RS : Oxide metal film RN : Fixed metal film

Circuit No.		
C101 0.001·M	Value	No indicated μF P : PF
	Tolerance	No indicated ±10% J : ± 5% M : ±20% Z : +80%, −20% D : ±0.5pF C : ±0.25pF
C102 0.1/16	Sort	Ceramic Electrolitic Mylar Polyester Styrol
	Voltage	No indicated 50WV

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with ✻, use specified ones stated on parts list since required temperature characteristics.

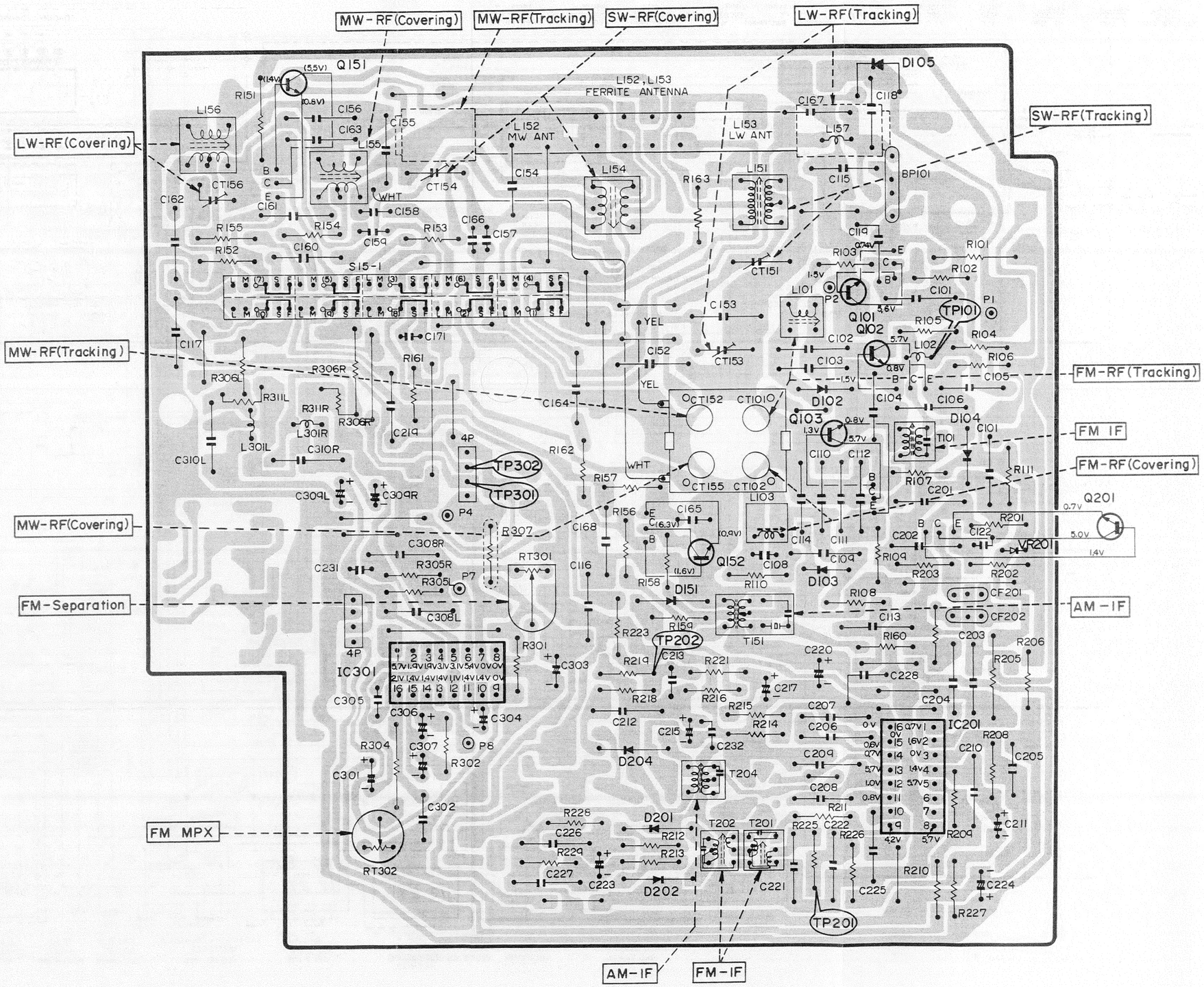
HOW TO READ CAPACITY OF RESISTOR SHAPE CAPACITORS

COLOR	RATED VOLTAGE
Pink	25V
Light green	50V

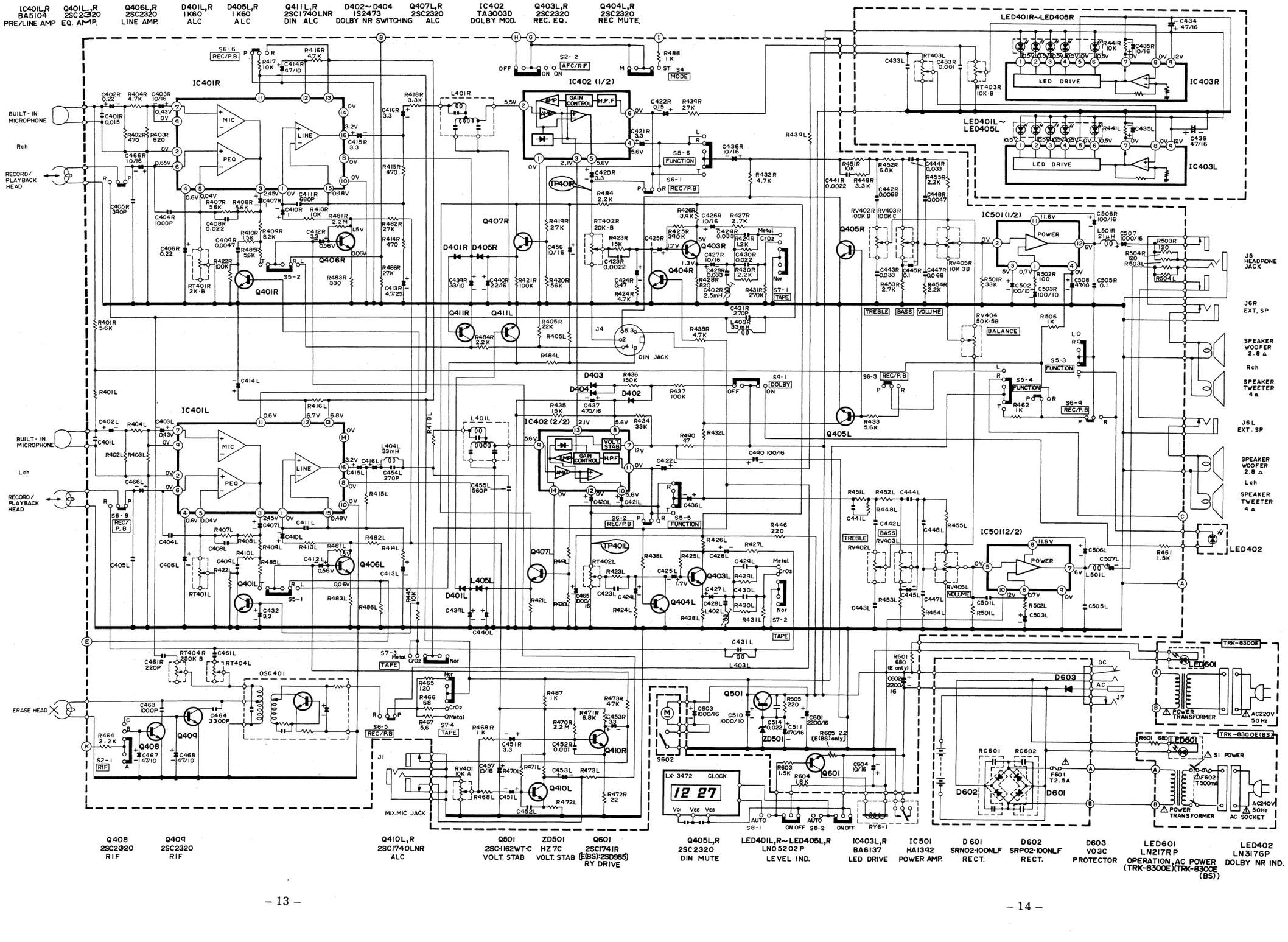


COLOR	CAPACITY	MULTIPLE	TOLERANCE	CHARACTERISTICS
Black	0	10^0	±20%	For temperature compensation
Brown	1	10^1		
Red	2	10^2		
Orange	3	10^3		
Yellow	4	10^4		
Green	5	10^5		
Blue	6			
Violet	7			
Grey	8		±30%	High dielectric constant type
White	9			For temperature compensation
Gold		10^{-1}	±5%	
Silver			±10%	High dielectric constant type

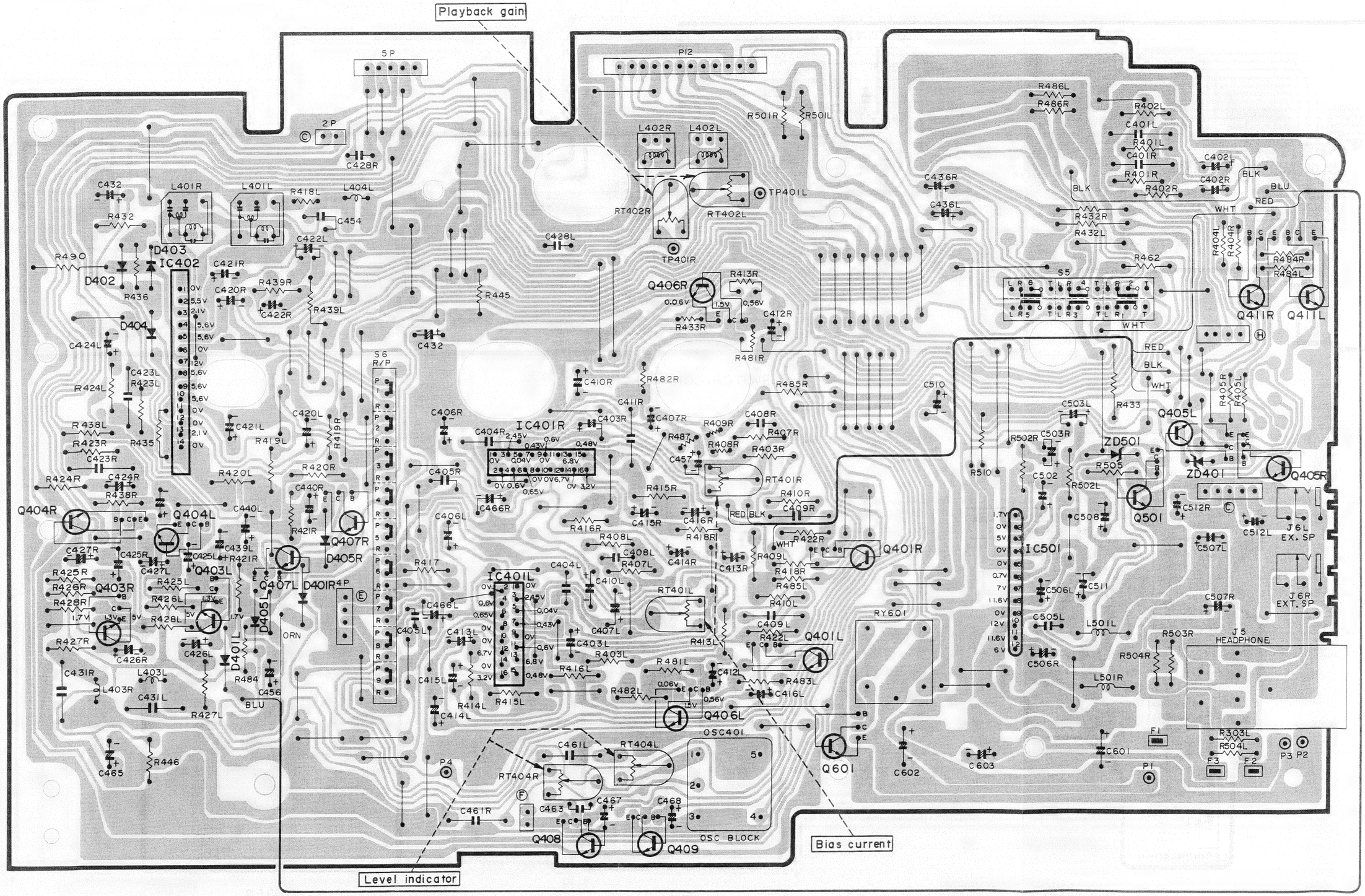
CIRCUIT BOARD DIAGRAM (Tuner Section)



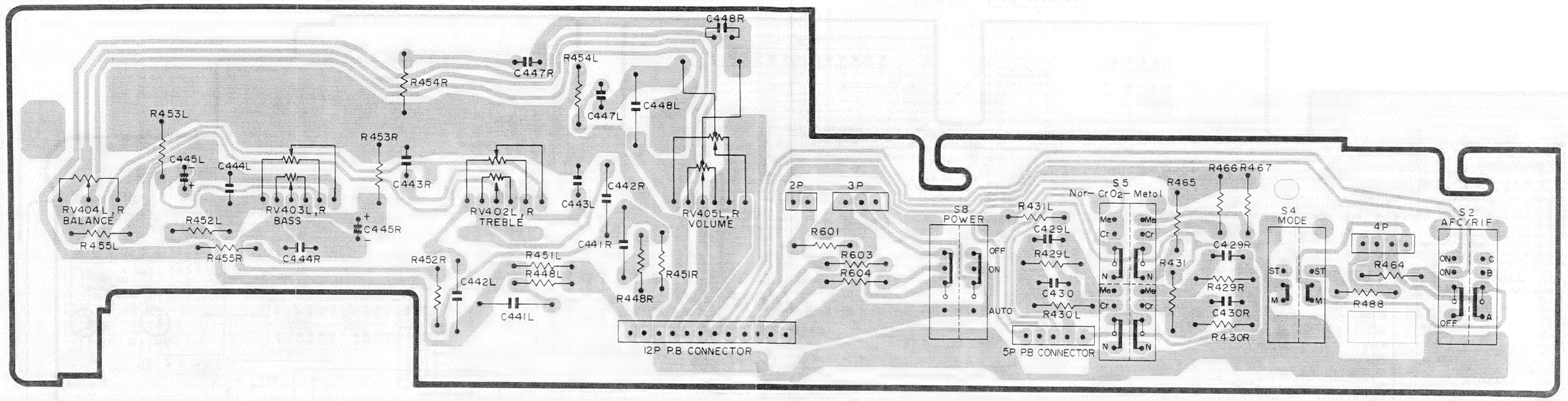
SCHEMATIC DIAGRAM (Tape Recorder Section)



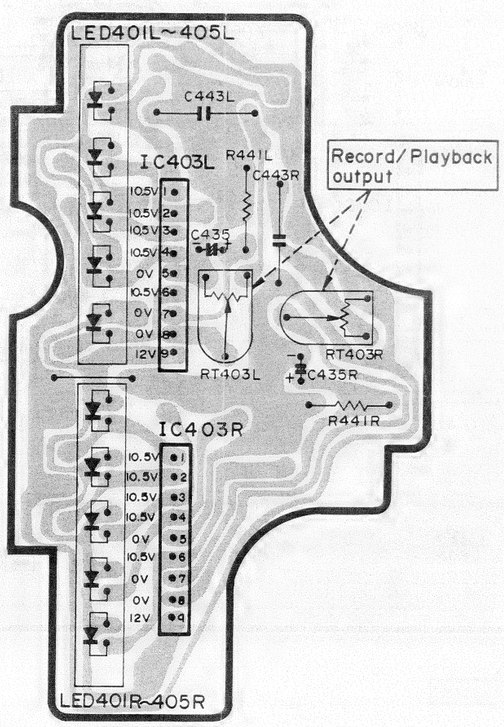
CIRCUIT BOARD DIAGRAM (Tape Recorder Section)



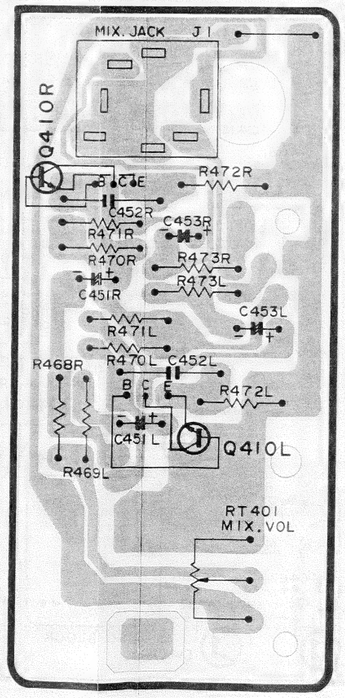
CIRCUIT BOARD DIAGRAM



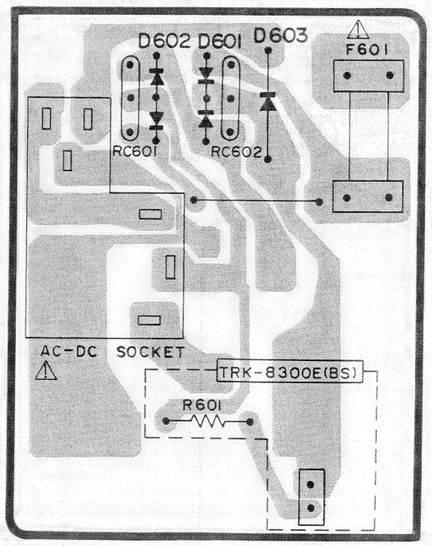
SWITCH/CONTROL



LEVEL INDICATOR

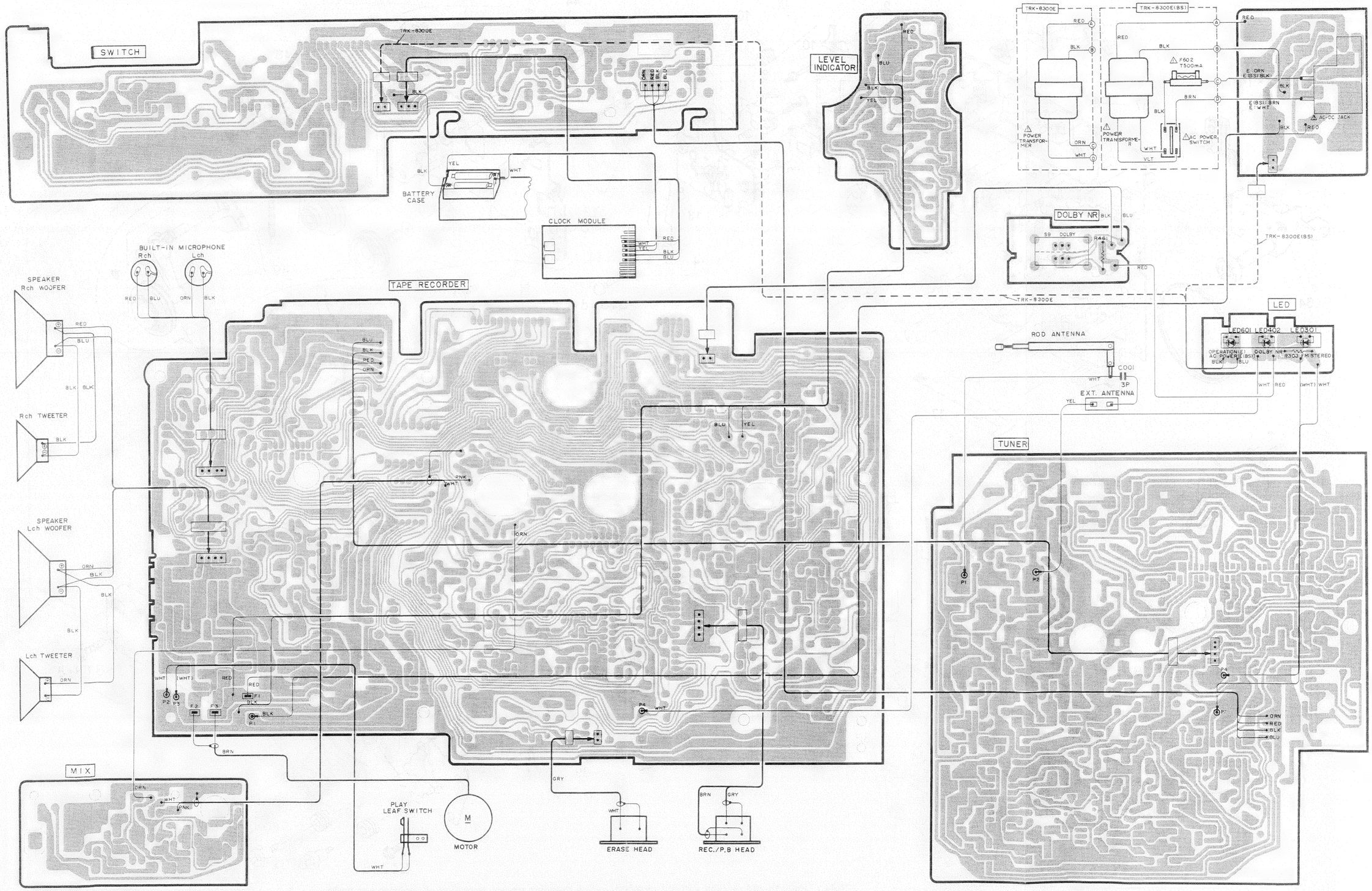


MIX

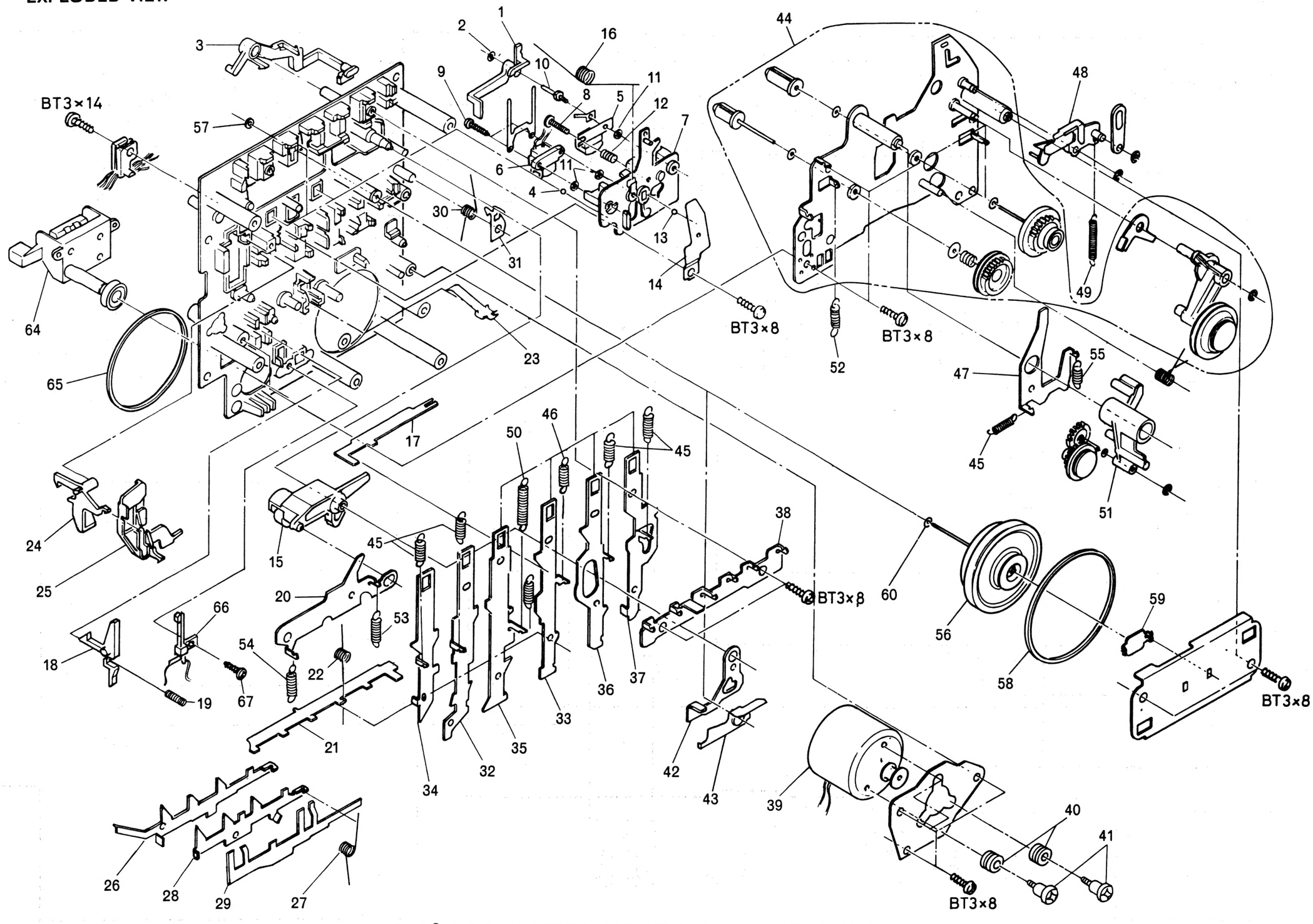


POWER

WIRING DIAGRAM

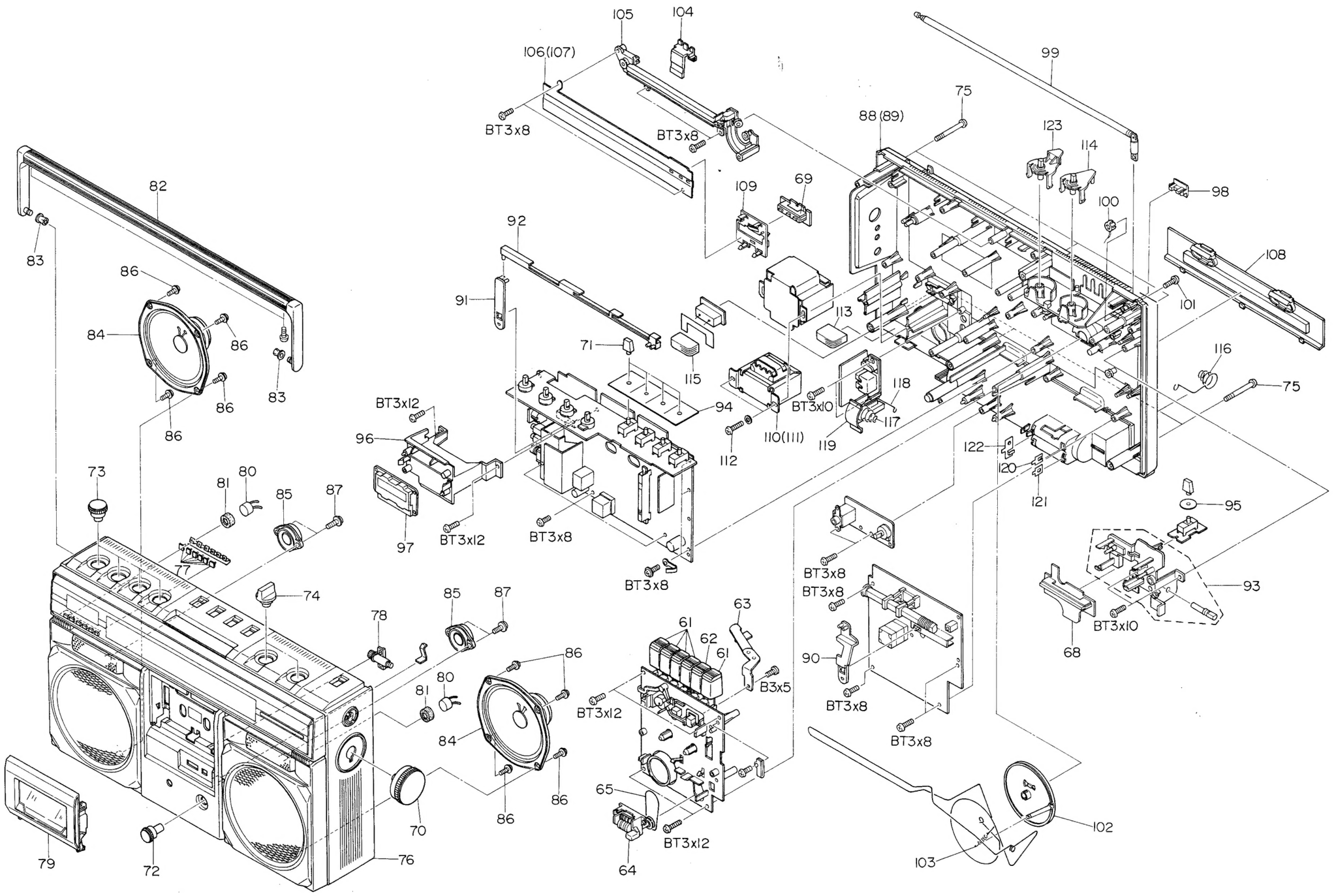


EXPLODED VIEW

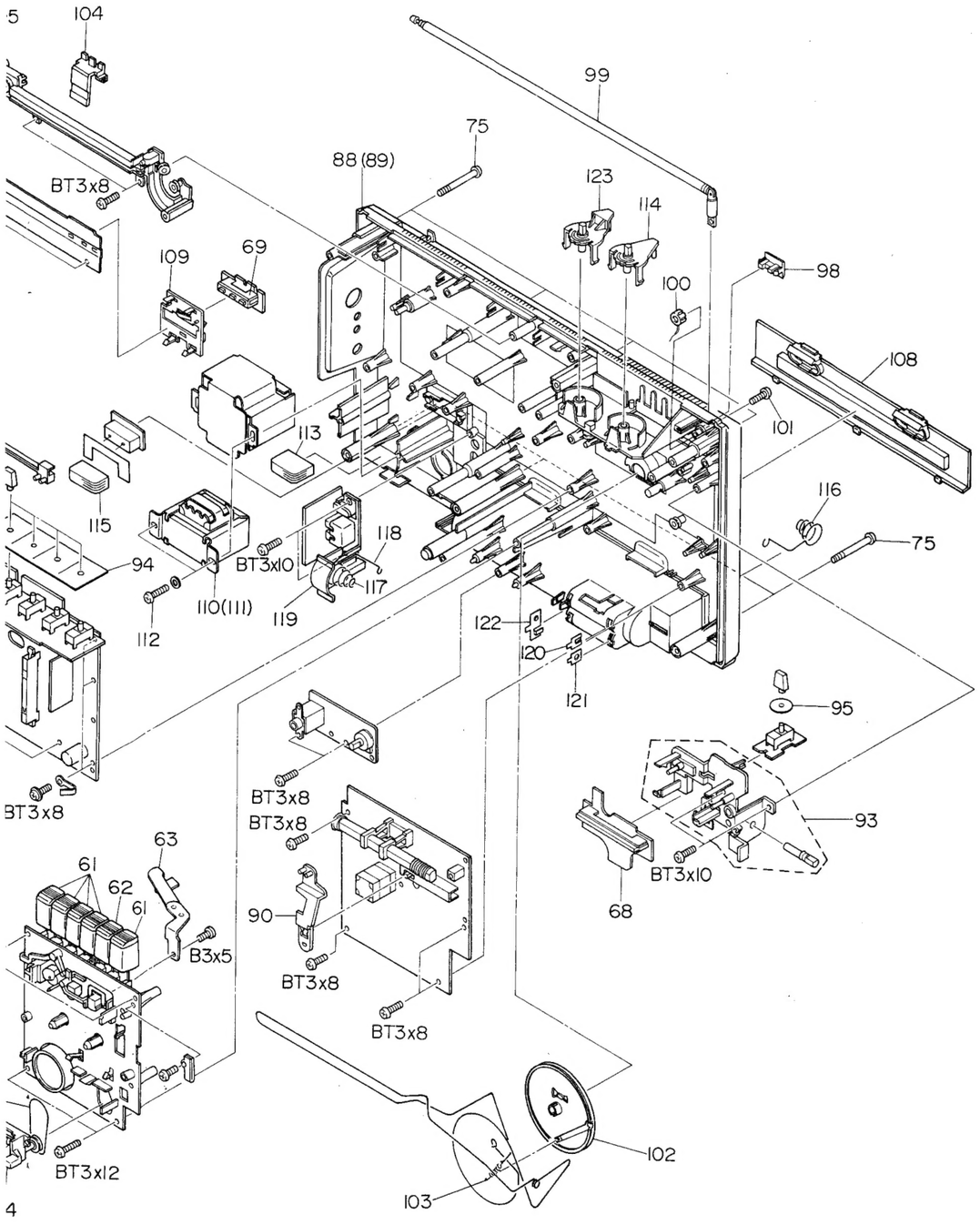


Note : Components marked without numbers in this drawing are not specified as replacement parts.

EXPLODED VIEW



Note : Components marked with outnumbers in this drawing are not specified as replacement parts.

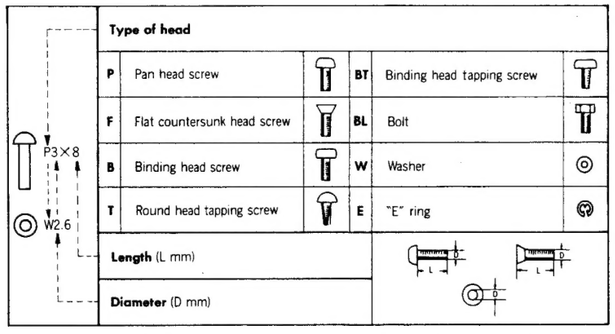


REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
		RESISTORS
RV401	5000893	VARIABLE RESISTOR 10K OHM(A)
RV402	5000905	VARIABLE RESISTOR 100K OHM(B)
RV403	5000906	VARIABLE RESISTOR 100K OHM(C)
RV404	5000892	VARIABLE RESISTOR 50K OHM(B)
RV405	5000912	VARIABLE RESISTOR 10K OHM(B)
		SEMI-CONDUCTORS
D102	5339011	DIODE 1S2473
D103	5330661	DIODE SILICON LS2790 200MHZ 80MW
D104	5339011	DIODE 1S2473
D105	5330571	DIODE IS2473VE
D151	5331052	DIODE 1K60RLF-2
D201	5331052	DIODE 1K60RLF-2
D202	5331052	DIODE 1K60RLF-2
D204	5331052	DIODE 1K60RLF-2
D401LR	5331622	DIODE 1N60FM-P
D402	5339011	DIODE 1S2473
D403	5339011	DIODE 1S2473
D404	5339011	DIODE 1S2473
D405LR	5331051	DIODE 1K60
D601	5331452	DIODE SRP02-100NLF
D602	5331451	DIODE SRP02
D603	5330001	RECTIFIER SILICON V03C 60H
IC201	5351064	IC AN2538B
IC301	5350684	IC HA1330
IC401LR	5352761	IC BA5104
IC402	5356832	MODULE TA3003D
IC403LR	5352572	IC BA6137
IC501	5352141	IC HA1392
LED301	5380593	LED LN417RP
LED401LR	5380462	LED LN05202P
LED402	5380462	LED LN03202P
LED402LR	5380462	LED LN05202P
LED403LR	5380462	LED LN05202P
LED404LR	5380462	LED LN05202P
LED405LR	5380462	LED LN05202P
LED601	5380593	LED LN417RP
Q101	5321271	TRANSISTOR SILICON 2SC1674L 600MHZ
Q102	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
Q103	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
Q151	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
Q152	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
Q201	5321281	TRANSISTOR SILICON 2SC1675-L 230MHZ 200M
Q403LR	5322621	TRANSISTOR 2SC2320E
Q404LR	5322621	TRANSISTOR 2SC2320E
Q405LR	5322621	TRANSISTOR 2SC2320E
Q406LR	5322621	TRANSISTOR 2SC2320E
Q407LR	5322621	TRANSISTOR 2SC2320E

SYMBOL-NO	P-NO	DESCRIPTION
Q408	5322621	TRANSISTOR 2SC2320E
Q409	5322621	TRANSISTOR 2SC2320E
Q410LR	5321293	TRANSISTOR 2SC1740LN-R
Q410LR	5321293	TRANSISTOR 2SC1740LN-R
Q411LR	5321293	TRANSISTOR 2SC1740LN-R
Q501	5320643	TRANSISTOR SILICON 2SC1162 150M
Q601	5322213	TRANSISTOR 2SC1741R
Q601	5322671	TRANSISTOR 2SD985 (BS)
VR201	5340022	VARISTOR SILICON HV-46 10K
ZD501	5330313	DIODE SILICON HZ7C 1.0M
		TRANSFORMERS
T101	5140071	FM IFT
T151	5160101	CERAMIC FILTER 46.8KHZ
T201	5148111	FM DISC
T202	5148112	FM DISC
T204	5130122	AM IFT
		COILS
L101	5126482	FM RF
L102	5150791	CHOKE COIL
L103	5126278	FM OSC COIL
L151	5123495	SW ANTENNA
L152	5115501	FERRITE CORE ANTENNA
L153	5115501	FERRITE CORE ANTENNA
L154	5123494	SW OSC
L155	5120319	OSC COIL
L156	5120465	LW OSC
L157	5123271	FM TRAP COIL 0.5MH
L301LR	5150571	CHOKE COIL 33MH
L401LR	5161661	DOLBY FILTER
L402LR	5120274	CHOKE COIL
L405LR	5150571	CHOKE COIL 33MH
L404L	5150571	CHOKE COIL 33MH
L501LR	5150761	CHOKE COIL
		MISCELLANEOUS
	5659121	BACK COVER
BP101	5161551	FILTER
CF201	5160211	CERAMIC FILTER CF107A
CF202	5160211	CERAMIC FILTER CF107A
⚠ F601	5721064	FUSE 2.5A
⚠ F602	5720173	FUSE T500MA (BS)
J 1	5674272	JACK (MIXING MIC)
J 4	5677021	DIN SOCKET
J 5	5674242	HEADPHONE SOCKET
J 6LR	5673381	SOCKET-3.5MMD (EXT SP)
⚠ J 7	5653241	AC-DC SOCKET
OSC401	5260361	OSC BLOCK
RY601	5641171	RELAY
⚠ S 1	5602022	SEESAW SWITCH (POWER) (BS)

SYMBOL-NO	P-NO	DESCRIPTION
		MISCELLANEOUS
S 2	5604092	LEVER SWITCH (RIF/AFC)
S 4	5604082	LEVER SWITCH (MODE)
S 5	5620501	SLIDE-SWITCH (FUNCTION)
S 6	5623433	SLIDE SWITCH (REC/PLAY)
S 7	5604281	LEVER SEITCH (TAPE)
S 8	5604092	LEVER SWITCH (TIMER)
S 9	5604082	LEVER SWITCH (DOLBY NR)
S 15	5625011	SLIDE SWITCH (BAND)
		FOR ACCESSARIES
⚠	5747321	POWER CORD (E)
⚠	5746341	POWER CORD (BS)
	5896391	FM ANTENNA (BS)
		FOR CASSETTE DECK ASSEMBLY (A)
1	6752792	PICK UP PIECE
2	7786115	POLYESTER WASHER
3	6752801	PICK UP LEVER
4	0948492	BALL - 2MMD
5	5449022	RECORD PLAYBACK HEAD
6	5445352	ERASE HEAD
7	6761471	HEAD PLATE
8	7781004	SCREW
9	7780913	TAPPING SCREW-2MMDX10MM
10	7545533	SPECIAL SCREW
11	7778183	POLYESTER WASHER
12	6321733	HEAD SPRING C
13	0948492	BALL - 2MMD
14	6329637	HEAD PLATE HOLDER
15	6383143	PRESSURE ROLLER ARM ASSEMBLY
16	6307741	SPRING
17	7286183	LEVER FOR PLAY/RECORD
18	6741104	RECORD PREVENTION ARM
19	6304161	SPRING
20	7286257	PLAY/RECORD PLATE
21	7308358	LOCK PLATE
22	6307733	SPRING
23	6530471	CASSETTE HOLDER
24	6740982	EJECT ARM
25	6761392	EJECT SLIDER
26	7329702	SWITCH PLATE
27	6308102	SPRING
28	7338032	S LOCK PLATE
29	7329721	PLATE FOR REVIEW/CUE
30	6307711	SPRING
31	7286245	PAUSE LOCK PIECE
32	7329335	RECORD SLIDER
33	7329352	REWIND SLIDER
34	7329321	STOP SLIDER
35	7329341	PLAY SLIDER
36	7329311	FF SLIDER
37	7329561	PAUSE SLIDER
38	7329301	SLIDER HOLDER
39	6420861	DC MOTOR ASSEMBLY
40	6576083	RUBBER PLATE
41	7539007	SPECIAL SCREW
42	7287819	RC LEVER
43	7311143	FF FUNCTION LEVER
44	7338571	TURNTABLE HOLDER ASSEMBLY
45	6300375	SPRING FOR RECORDING PLATE
46	6324814	SPRING
47	7286032	LEVER FOR FF/REWIND
48	7317882	SETTING OFF LEVER ASSEMBLY
49	6300597	SPRING
50	6301233	SPRING
51	7109603	FF/REWIND ARM ASSEMBLY
52	6300981	SPRING
53	6301361	SPRING
54	6323064	SPRING
55	6300996	SPRING
56	6373361	FLYWHEEL ASSEMBLY
57	7778856	POLYESTER WASHER
58	6354211	BELT



When ordering hardware excluding stated on these lists, be sure to make your orders with type and size.

SYMBOL-NO	P-NO	DESCRIPTION
		FOR CASSETTE DECK ASSEMBLY (A)
59	6743884	THRUST SUPPORT
60	7786621	POLYSLIDER WASHER
		FOR CASSETTE DECK ASSEMBLY (B)
61	6060252	BUTTON ASSEMBLY (FF, PAUSE, REW, PLAY, STOP)
62	6060251	BUTTON ASSEMBLY (REC)
63	6535021	RECORD SPRING ASSEMBLY
64	5559257	COUNTER
65	6355202	COUNTER BELT
66	5603451	LEAF SWITCH
67	7780185	PAN HEAD B TIGHTENING SCREW-2.6MMDX6MM
68	6766411	LED HOLDER
69	6766401	LED HOLDER
		MISCELLANEOUS
70	6283417	TUNING KNOB
71	6296851	LEVER KNOB
72	6283511	KNOB-18MMD
73	6283722	KNOB (BASS,TREBLE,BALANCE)
74	6283391	KNOB ASSEMBLY (FUNCTION,BAND)
75	7781148	BT SCREW-3MMDX50MM
76	6106452	FRONT CASE ASSEMBLY
77	6052683	LCD BUTTON (TIME SET)
78	6763961	GEAR DAMPER ASSEMBLY
79	6093252	CASSETTE LID
80	5421571	BUILT IN MICROPHONE
81	6570291	MIC COVER
82	6334303	HANDLE ASSEMBLY
83	6763912	HANDLE PIECE
84	5406413	SPEAKER-12CM
85	5409111	SPEAKER-3CM
86	7781133	BT SCREW-3MMD
87	7781133	BT SCREW-3MMD
88	6106472	REAR CASE ASSEMBLY
89	6106473	REAR CASE ASSEMBLY (BS)
90	6766371	BAND SELECT LEVER
91	6766381	FUNCTION LEVER
92	6766421	FUNCTION SLIDER
93	6766951	TUNING HOLDER ASSEMBLY
94	7766651	SPACER
95	7766471	SPACER
96	6765921	LCD HOLDER
97	5310401	CLOCK MODULE (LX-3412H)
98	5671661	FM ANTENNA TERMINAL
99	5752601	ROD ANTENNA
100	5687142	CAP TERMINAL
101	8744414	BIND SCREW-3MMDX14MM
102	6345881	PULLEY
103	6316231	SPRING M
104	6398731	POINTER
105	6766861	SCALE HOLDER ASSEMBLY
106	6468062	SCALE PLATE
107	6468063	SCALE PLATE (BS)
108	6173454	BATTERY LID ASSEMBLY
109	6766851	LED P.W.B HOLDER
⚠ 110 (PT)	5212682	POWER TRANSFORMER
⚠ 111 (PT)	5212683	POWER TRANSFORMER (BS)
112	7781146	BT SCREW-3MMDX20MM
113	6746881	FUSE COVER (BS)
114	6758571	BAND LEVER
115	6746902	SWITCH COVER (BS)
116	6308961	BATTERY SPRING
117	6545652	BATTERY TERMINAL
118	7776201	BATTERY TERMINAL
119	6766841	TERMINAL HOLDER
120	7339191	BATTERY TERMINAL(-)
121	7339201	BATTERY TERMINAL(+)
122	7339211	BATTERY TERMINAL(+,-)
123	6766361	FUNCTION LEVER